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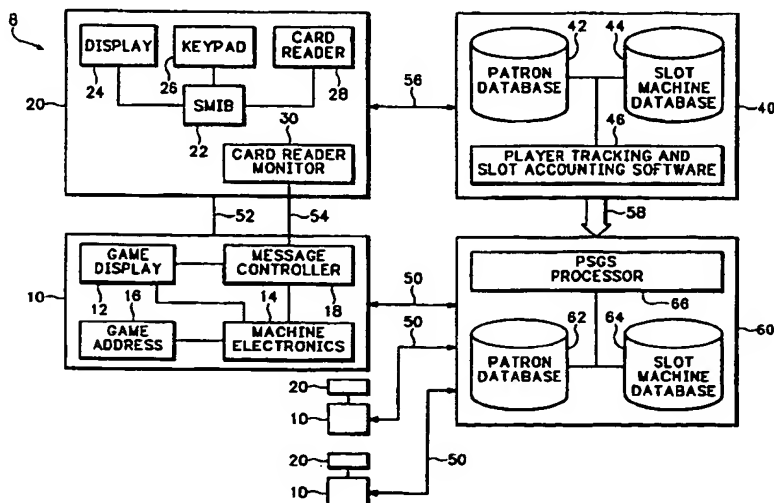
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(54) Title: METHOD AND APPARATUS FOR AWARDED INDIVIDUAL OR GROUP POINT MULTIPLICATION



(57) Abstract: In use, the player would insert his or her player card at the EGM 10. The system checks to see if any multiplier currently applies to the machine and player. The multiplier is available as a token and can communicate to the guest via display on the EGM. The multiplier would be displayed using a conditional message feature of the display. Session points would accumulate at the "multiplied" rate and are displayed as such on the EGM display. Alternately, an assurance message is available to be displayed frequently that shows the current multiplier. When the player removes his or her card, the session is posted to the patron management system. Casino personal can then review the session detail by accession the history of the player at a workstation capable of querying the player tracking system. The session multiplier and points earned by the multiplier are listed within the record.

## METHOD AND APPARATUS FOR AWARDING INDIVIDUAL OR GROUP POINT MULTIPLICATION

### BACKGROUND OF THE INVENTION

#### 5      1. Field of the Invention.

This invention relates generally to electronic gaming machines and more particularly to a method and apparatus for integrating secondary bonusing schemes within primary gaming machines coupled to an external control system.

#### 10      2. Description of the Prior Art.

Linking together electronic slot machines on a computer network is known in the art. One example of such a network is disclosed in U.S. Patent No. 5,572,882 to Acres et al. ("the '882 patent"), which is assigned to the assignee of the present application. The '882 patent is incorporated herein by reference for all purposes and discloses a number of different bonuses, which pay awards to  
15      players at their respective slot machines that are over and above any awards dictated by the paytables of the machines.

One such bonus award is paid randomly to one of the players via that player's slot machine. Once a slot machine is selected for this type of award, a computer on the network transmits a command to the slot machine that causes it  
20      to pay a predetermined amount from the hopper of the machine to the player.

Another type of award is personal to each player and is based on the level of that player's play. As discussed in the '882 patent, a player may be issued a player-tracking card that is insertable into a card reader associated with each slot machine. The network collects data relating to the player's play and stores it in a  
25      central computer. Personal awards to the player may be a predetermined amount or a percentage of the player's total play. They are awarded upon the occurrence of a predetermined event, e.g., when the player's cumulative wagers exceeds a predetermined level.

Player tracking points is another award sometimes given to players of  
30      networked gaming devices. Each player who uses their card accrues a predetermined number of points for each dollar wagered on the networking gaming

particular month, all women, everyone over a certain age, or anyone from a certain geographic location (e.g. limited by city and/or state). Multiple point rewards may also be granted based on individual achievement such as the achievement of a personal play goal, where a random award is made to the player  
5 based on a casino visit, as well as an awarding the multiple based on a machine game outcome such as when a Lucky Coin result is hit.

Player point multiples can have several criteria. The value of the multiplier is one such selectable criterion. Other criteria include a schedule for activating the multiplier, e.g., by day, date and time, and whether a single instance  
10 or a recurring instance (with or without exceptions), as well as the duration in which the multiplier is active. Specific players can be associated with the multiplier as well as groups, and certain games can also be associated with the multiplier. Finally, certain coupons or other collectables may trigger the multiplier.

15 The foregoing and other objects, features and advantages of the invention will become more readily apparent from the following detailed description of a preferred embodiment of the invention that proceeds with reference to the accompanying drawings.

## 20 BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a block diagram illustrating components of the PSGS system according to an embodiment of the invention.

FIG. 2 is a block diagram illustrating divisions on a game screen according to embodiments of the invention.

25 FIG. 3 is a screen shot illustrating an example game screen with a Player's card inserted.

FIG. 4 is a screen shot illustrating an example game screen with a Player's card removed.

30 FIG. 5 is an example flow diagram illustrating communication between components of the PSGS system according to embodiments of the invention.

unique player-tracking card to the player and opens a corresponding player account that is stored on an accounting system. The account includes the player's name and mailing address and perhaps other information of interest to the casino in connection with marketing efforts. Prior to playing one of the EGMs in FIG. 1, the player inserts the card into reader 30 thus permitting the player tracking system 40 to track player activity, such as amounts wagered and won and rate of play.

To induce the player to use the card, the casino awards each player points proportional to the money wagered by the player. Players consequently accrue points at a rate related to the amount wagered. The points are displayed on display 24. In prior art player tracking systems, the player may take his or her card to a special desk in the casino where a casino employee scans the card to determine how many accrued points are in the player's account. The player may then redeem points for selected merchandise, meals in casino restaurants, or the like, which each have assigned point values.

Before describing the manner in which the present invention is implemented on the network of slot machines depicted in FIG. 1, consideration will first be given to terminology used in the description.

First, a player-tracking account is one that is established by the casino, typically for an identified player -- although the invention could be implemented with an anonymous account. The player-tracking account is referred to herein as a *player account*. When the player inserts his or her card into card reader 30 of EGM 10, information related to that player's account is fetched from the host computer, transmitted on the network, and stored in the RAM included in SMIB 22 of EGM 10. Such information includes player-tracking points, which are referred to generally herein as *account points*. In accordance with the present invention, the player's account may also include credits that may be transferred by the player from the player's account to the credit meter on the machine and thereafter wagered by the player. These credits in the player's account are referred to herein as *account credits* and are awarded and redeemed as described

Although only one detailed EGM 10 is illustrated in FIG. 1, multiple EGMs 10 can be connected to the PSGS server 60 over a separate or shared communication link 52. Each of the EGMs 10 has an accompanying set of player tracking hardware 20, which also connects to the player tracking system 40 through a casino system network link 56, although these links have been omitted in FIG. 1 for clarity.

Within the PSGS server 60 are a patron database 62 and a slot machine database 64, the contents of which are described below. The PSGS server 60 may be embodied by a single or multi-processor computer having 1-4 CPUs, for example. Intel PENTIUM or AMD 32 or 64 bit processors operating at 2Ghz or faster could drive the server 60. The operating system could be a MS Windows, BSD, or Linux based system, for example Redhat Advanced server. The database could be Oracle, SQL Server, MySQL, or PostgreSQL and connected by JDBC (Java DataBase Connectivity), for instance. Additionally, the PSGS server 60 can host a web server, such as an Apache server, and an application server such as Tomcat or JBoss, which are well known in the industry. Security on the PSGS network 50 uses SSL (Secure Socket Server). A communication protocol for use between the PSGS server 60 and the EGM 10 could be XML-RPC Communication protocol, for instance.

The EGMs 10 may be powered by a less powerful processor than the PSGS server, such as a single Intel Celeron or Pentium processor. In one embodiment, the EGMs 10 operate using a customized kernel for the Linux Operating System.

The EGM 10 may communicate to the Player Specific Game Server 60 over the PSGS network 50 using an Ethernet port. The protocol used could be TCP/IP. Upon initialization, the EGM 10 will configure the network adapter utilizing an address obtained for the particular machine. A game address block 16 may include an address, for example a TCP/IP address burned into an EPROM that is coupled to a set of machine electronics 14. When initialized, the machine electronics reads the previously burned address as the address to use for itself on boot-up. Providing a previously burned and relatively hard coded address

In a base game and bonus scheme, certain features are available to carded players that are not available to uncarded players. These special game features may be advertised to uncarded players to give them an extra incentive to join the loyalty program in the casino where the game is located.

5 In a particular embodiment a game according to embodiments of the invention includes a base game, which could be a video slot machine for instance. The base game may be played by carded and uncarded players alike. The game can include one or more bonuses. Some of the bonuses are available to carded and uncarded players, while other bonuses are available only to carded players. In  
10 one particular bonus, available only to carded players, the players take a simulated "journey" along a path beginning at a first location and ending at a known destination. An indicator of where the player is on the journey advances along a displayed route, so the player knows where they are in the journey. A player advances to another point on the journey when events occur. For instance, in a  
15 simple embodiment, the journey may begin after the carded player has played for "x" minutes, or has played "y" number of games, or has played "z" amount of value in the game. The last determination, amount of value played in the game is known as "coin-in", and is a measure of how much money the patron has spent on the game, no matter how long it took the patron to do so. Using coin-in is a  
20 convenient way to measure patron activity. For example, the journey may include 10 stopping points and the player advances to the next stopping point after the player has the minimum amount of coin-in since the previous stopping point. In a more advanced embodiment, the triggering event that causes a player to advance from one stopping point to another can be a random or pseudo random event.

25 To complete a reward journey, a player may have to spend a relatively long time at the game. Using embodiments of the invention, a player may split portions of the reward journey into multiple "sessions" of play. For instance, the player may initially play the game for 45 minutes and may advance to the second of ten stops on the reward journey. In embodiments of the invention, because the  
30 player is a carded player, the PSGS server 60 may record and "store" the player's progress. Thus, when the player returns and re-identifies themselves by inserting

pool funding mechanism could be employed. In some embodiments, the reward pool operates similar to a personal progressive reward as described below.

Personal progressive awards are well known to those skilled in the art.

Referring back to FIGs. 1 and 2, a game screen 12 is divided into a central area 110, where the main game is shown, a reward feature messaging area 112,  
5 and a button and game meter area 114. In this embodiment, the central area 110 is divided into five discrete areas for video reels.

The reward messaging area 112 is can include messages informing the patron of reward features, status in the reward feature, help screens, payable  
10 screens, and other miscellaneous details to help explain or entertain the patron. As illustrated in FIG. 3, the reward messaging area 112 includes a simulated "map" of Route 66, from Illinois to California, while the same area in FIG. 4 shows an informative message to the player. Graphics to be displayed in the messaging area 112 can be stored within the EGM 10 itself, or within the PSGS  
15 server 60, for instance. If the graphics are stored on the EGM 10, the PSGS server 60 can direct the EGM when to display particular graphics. Communication protocols between the PSGS server 60 and the EGM 10 are discussed in detail below.

When the game on the EGM 10 is initialized, an initial view is illustrated  
20 on the display 12. Messages and graphics can be shown informing the player that certain benefits are available to a carded player that are not available to an uncarded player. In addition, the initialization screen may allow a non-carded player to view a details screen, described below, as well as the payable for the reward feature.

25 When a player inserts his or her card, a message in the reward feature messaging area 112 can welcome the player by name and can communicate the player's status in the reward feature, such as by generating a map indication the player's current position on the "journey".

If a non-carded player is playing the game on the EGM 10, the reward  
30 messaging area 112 can illustrate enticing messages that invite the non-carded player to register to become a carded player.

paytable to the one just loaded by the PSGS server 60, such that the gaming table is personalized for that player.

The award table for player complementary points can also be modified in consideration of the specific player identified. The present invention incorporates  
5 the concept of point multiplication into promotions focused to individual players or player groups to provide individualized enticements.

In principle, there are two broad categories of uses for this concept and within those categories. The use categories are: promotional multiplied point time, and reward multiplied point time. In all of these cases, the multiplied point  
10 time is configurable for the active time period. In many of the examples, an all-day approach would be more suitable. But in some cases, particularly those where the multiplied point time is being used as an award, a much more limited time period would be appropriate.

As a promotional reward, a casino can manipulate the amount of points  
15 given at the slot machine during specific times or for specific players. The purpose of this modification is to provide an automated method of configuring the multiplier, the applicable time of the multiple, and the players to which the multiple applies.

Some examples of the expected potential uses of this concept are where a  
20 multiplied point award is granted on special days specific to the player identified. Such special days can include the birthday of the player, an anniversary, the first day of slot club membership, and an anniversary of slot club membership. Multipliers can also be applied to groups of players such as those born in a particular month, all women, everyone over a certain age, or anyone from a  
25 certain geographic location (e.g. limited by city and/or state). Multiple point rewards may also be granted based on individual achievement such as the achievement of a personal play goal, where a random award is made to the player based on a casino visit, as well as an awarding the multiple based on a machine game outcome such as when a Lucky Coin result is hit.

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playing under a normal 1:1 multiplier may after a few minutes enter into in a scheduled multiplier promotion event. The player would earn player points according to the initial regular 1:1 multiple and then, when the bonus multiplier takes effect, begin to accumulate subsequent points by a multiplied ratio. A bonus multiplier ending during a play session would operate in reverse, with the multiplied points being awarded until the multiplier event ends and then points are accumulated as normal.

The valued by which points are multiplied are preferably a positive decimal with 2 places; i.e.: 1.25. Though theoretically the number may be quite large, a configurable "safety" number or allowable max should be kept in the database. This would prevent users from entering any number greater than this allowable max. This value is then applied to included players during the scheduled period.

The multiplier (and recurring event) can be scheduled via a patron management application using a user interface similar to Outlook marketed by Microsoft Corporation. It is preferred that the application permit removing a selected instance of the multiplier. For instance, a recurring multiplier set to run on Wednesdays from 2:00PM to 4:00PM would allow a user to remove a particular Wednesday (e.g. one occurring during a popular gaming day).

In creating a multiplier, the user would have to determine if it was applicable to all players or to a specific group. If the group option is selected, the user would select one or more Groups to associate to the multiplier. If a player is part of more than one multiplier, the highest is used-the multipliers are NOT added together.

Similar to associating players to the multiplier, the user would have to determine if the multiplier is applicable to all machines on the floor or to specific machines. If the specific machine option is selected, the user would select one or more machines to associate to the multiplier. A machine may be part of more than one multiplier though the multiplier to be applied is determined by the user playing the machine as described in the above process. The machine selector

**TABLE 2**  
*Point Multiplier Audit Trail*

Multiplier ID	Description	Begin	End
1	Double Point Wednesdays	5/29/02 12:00AM	N/A

Date Time	User	Field	From	To
5/1/03 12:00AM	S. Kastner (59425)	Description	---	Double Point Wednesday
5/1/03 12:00AM	S. Kastner (59425)	Begin	---	5/29/03 12:00AM
5/1/03 12:00AM	S. Kastner (59425)	Recurrence	---	Occurs every Wednesday effective 5/29/2003 from 10:30AM to 11:30AM
5/1/03 12:00AM	S. Kastner (59425)	Machines	---	<All>
5/1/03 12:00AM	S. Kastner (59425)	Players	---	<All>
5/1/03 12:00AM	C. Iddings (12345)	Machines	<All>	10000-12000, 15000-15430

5

A point multiplier session detail would list the sessions by multiple instance, e.g. the player sessions affected by the multiplier. The fields of the session detail would include such information as the player, the session start, the session end, the machine ID, the coin in, the base points earned, the multiplier points earned, the actual win, and the theoretical win.

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As one can imagine, countless variations in modifying machine tables are possible. The PSGS server 60 may modify machine paytables at games to which it is connected every hour. Therefore, a particular machine outcome at 5:00am may be different from one at 11:00pm. Additionally, if a player known to the PSGS server 60 is playing a machine at 5:00am, the PSGS could be programmed to either override the standard "modified" payable, or to load the payable that

15

A flow 200 begins at a process 210 when a player inserts their player tracking card into the card reader 28 of the player tracking hardware 20. The card reader monitor 30 reads data from the card and can perform a low-level check on the card before sending the data from the card to the player tracking system 40, along with a "card-in" request, in a process 220.

The player tracking system 40 authenticates the player by verifying the information against data stored on a patron database 42 and/or a slot machine database 44 in a process 230. This information is then sent to the PSGS server 60. In a process 240, the PSGS server 60 determines if the particular identified player has a previously stored game record, i.e., that the player had already begun a reward journey in a previous game session. If not, a new game record is created in a process 244. If the player had a previous game session, the record is retrieved in a process 246. Then, either the newly created or the retrieved record is sent to the EGM 10 in a process 250.

Once the record is sent to the EGM 10, the game makes adjustments based on the record in a process 260. For example, if the player had already progressed to the third of ten stops in the reward journey, then the EGM 10 would change to a state where the third stop had already been reached. Next, the EGM 10 displays a personalized message in the reward area 112 of the gamescreen 12, which informs the player that he or she has been recognized by the system, and that credit for previous play has been acknowledged and accredited by the EGM 10.

The following provides more details of messaging and message interaction between the between card reader monitor 30 (CRM 30), the message controller 18 (MC 18), the EGM 10 and the PSGS server 60 according to embodiments of the invention.

The MC 18 is the "traffic cop" for messaging within the PSGS system 8 of FIG. 1. The MC 18 can be embodied by a process that runs on the EGM 10, but is separate from the game itself. Typically, the MC 18 would be started before a game running on the EGM is started, and would be running prior to the player tracking hardware 20 being initialized. The MC 18 could be a software process that is initialized using an AGPx start-up process. In the event the MC 18

bonus events and/or reward redemptions during a communications failure between the MC 18 and the other components. Under that scenario, a player could in fact redeem his/her winnings then move to another machine and resume play. If communications were down, the PSGS system 8 would be unaware that the player had already redeemed the awards and could possibly resume play at the point where communications had failed. Therefore, the possibility would exist that the player redeems the rewards twice. To prevent against this possibility, only a very limited number of messages are can go unacknowledged by the PSGS server 60 before PSGS functionality is disabled.

For example, if the PSGS server 60 does not respond before the aforementioned message limit is reached, another message will be sent to the EGM 10 which causes the PSGS functionality to be disabled due to server non-availability. In case of a power failure on the EGM 10, the MC 18 should be able to retain a message log, which is stored on the EGM 10, and resynchronize with the PSGS server 60 once communication has become re-established.

Various message types can be used between the PSGS server 60, the MC 18, and the card reader monitor 30. In developing messages or a messaging system, considerations such as those listed below in Table 3 can be considered.

**TABLE 3**  
*Message Information*

Message Type	Message Description
Message	class name of the message
Message Handler	class name of the handler for the message
Originator	Who originated this message?
Recipient	Who is the intended recipient?
Purpose	Why is this message being generated?
Transport Mechanism	Along each step in the process, what mechanism is used?
Format	What data format is utilized?
Data	What data is being sent?

Session Begin	Sent to the PSGS server 60 from the EGM 10, this signifies the player has ended the currently active session.
Session End	Sent to the EGM 10 from the PSGS 60, this message contains a session that was requested by the EGM 10 with a Session Begin message.

An example sequence of messages between the EGM 10, the player tracking hardware 20, the player tracking system 40, and the PSGS server 60 Message Sequence is reproduced below.

5           The message sequence begins when the EGM 10 is initially powered, and it generates a Machine Authentication message. The PSGS server 60 receives the message, authenticates the machine, and sends back a Machine Transfer message. When a card-in event occurs, the card reader monitor 30 generates input to the message controller 18, which in turn generates a Patron Authentication message to  
10           the PSGS server 60. After the PSGS server 60 receives the Patron Authentication message, it retrieves the data on the particular patron and sends a Patron Transfer message to the EGM 10, which includes data about the player.

          Next, the message controller 18 generates a Session Begin message and the PSGS server 60 generates a Session Transfer message in response, sending the  
15           information of either a stored game session that was retrieved from one of the PSGS server databases 62, 64, or a new game session.

          When a player places a bet, the EGM 10 generates a Patron Bet message, which is received by the PSGS server 60 and updates the particular database 62, 64. Then the PSGS server 60 generates a Patron Bet Response message and sends  
20           it back to the EGM 10. When a patron achieves a target, i.e., a stop on the reward journey, the EGM 10 generates a Bonus Reward message, and sends it to the PSGS server 60. The PSGS server 60 receives the Bonus Reward message, updates its database 62, 64, and generates an Ack message in response.

          If a card-out event occurs, i.e., the player removes their player id card, the  
25           card reader monitor 30 generates input to the message controller 18. The message controller 18 then generates a Session End message and sends it to the game running on the EGM 10. The game then generates another Session End message and sends it to the PSGS server 60. In response, the PSGS server 60 updates its

## CLAIMS

1. A gaming network comprising:  
a gaming device;  
player tracking hardware coupled to the gaming device and structured to  
5 identify a player of the gaming device;  
a player tracking system coupled to the gaming device and structured to  
store data about gameplay of the player of the gaming device; and  
a player specific gaming server coupled to the player tracking system and  
coupled to the gaming device, the gaming server structured to record session  
10 information of the gaming device by the player, and to award additional player  
points to the player above a basic ratio.
2. The gaming network of claim 1, further comprising:  
a message controller on the gaming device, and  
a messaging process operative on the gaming server.
- 15 3. The gaming network of claim 2 wherein the message controller  
communicates with the messaging process using discrete messages.
4. The gaming network of claim 1 wherein the gaming device is  
structured to communicate to the player tracking system over a first  
communication network, and wherein the gaming device is structured to  
20 communicate to the player server over a second communication network.
5. The gaming network of claim 1, wherein the player-specific  
gaming server includes a program adapted to store a plurality of player point  
multiplier configurations, said configurations resulting in the award of the  
additional player points responsive to play of the gaming device.
- 25 6. The gaming network of claim 5, wherein the configurations include  
qualification criteria related to the time at which the gaming machine is played.
7. The gaming network of claim 5, wherein the configurations include  
qualification criteria related to membership of a player within a specified group.
8. The gaming network of claim 5, wherein the configurations include  
30 qualification criteria related to play on certain specified gaming machines.

15. The method of claim 10, wherein the criteria for determining player qualification includes whether the identified player is playing on a specified machine.

5 16. The method of claim 10, wherein the criteria for determining player qualification includes whether the player has used a coupon in association with play on the gaming machine.

17. A method of providing incentive to play gaming devices connected by a network to a host computer comprising:

10 creating a player account accessible by the host computer;  
designating a bonus player point earning time period;  
tracking the level of gaming-device play of a player associated with the account during the earning time period; and  
15 applying player points according to a first ratio when play of the gaming device occurs during the bonus player point earning time period, and according to a second ratio when play of the gaming device occurs outside of the player point earning time period, wherein the first ratio is larger than the second ratio.

18. The method of claim 17, wherein the first ratio is a multiplier of the second ratio.

20 19. The method of claim 17, further including the step of designating a second bonus player point earning time period and a third ratio, wherein the highest of the first and third ratios are used if play occurs during both the earning time and the second earning time.

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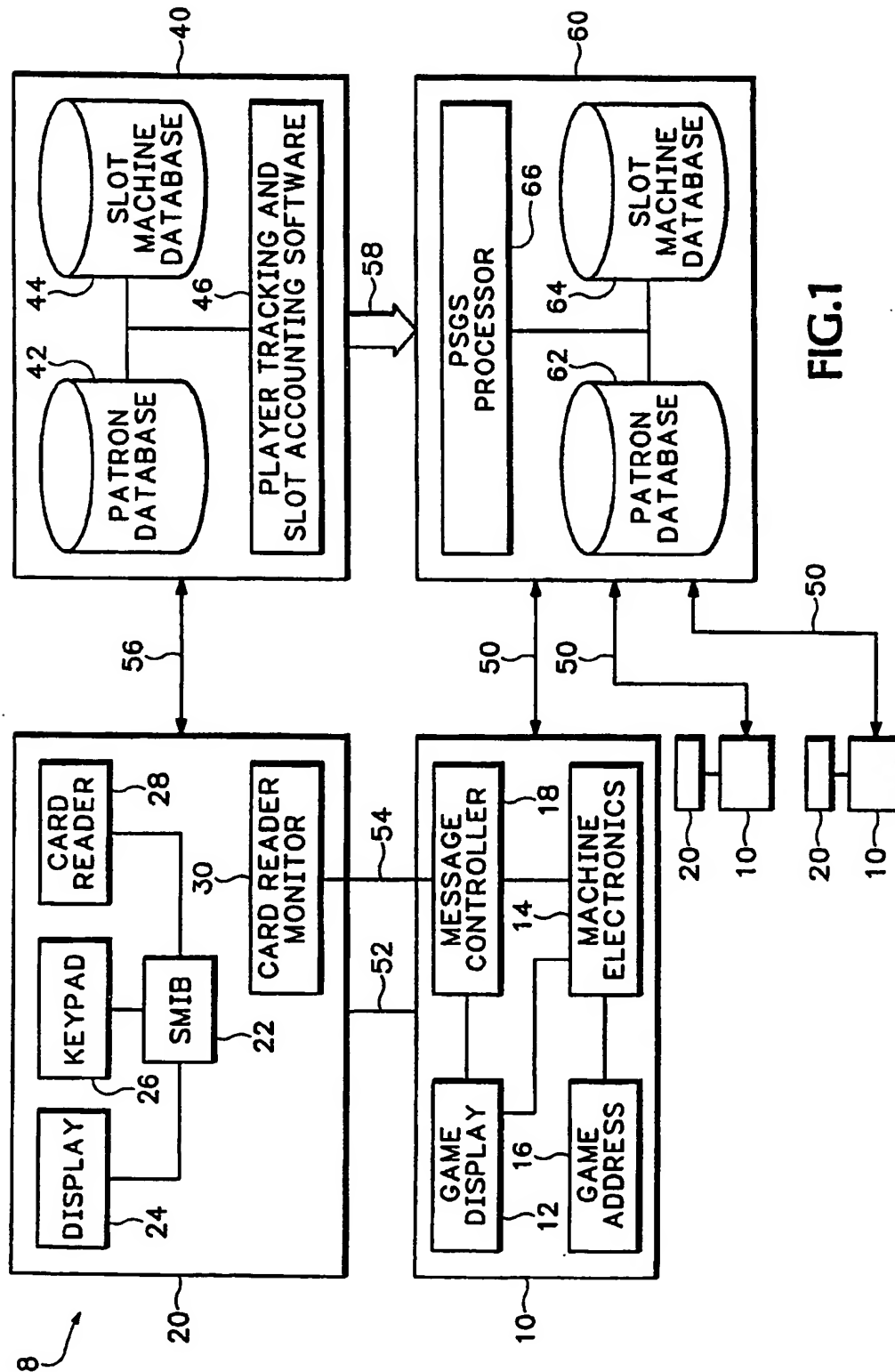


FIG.1



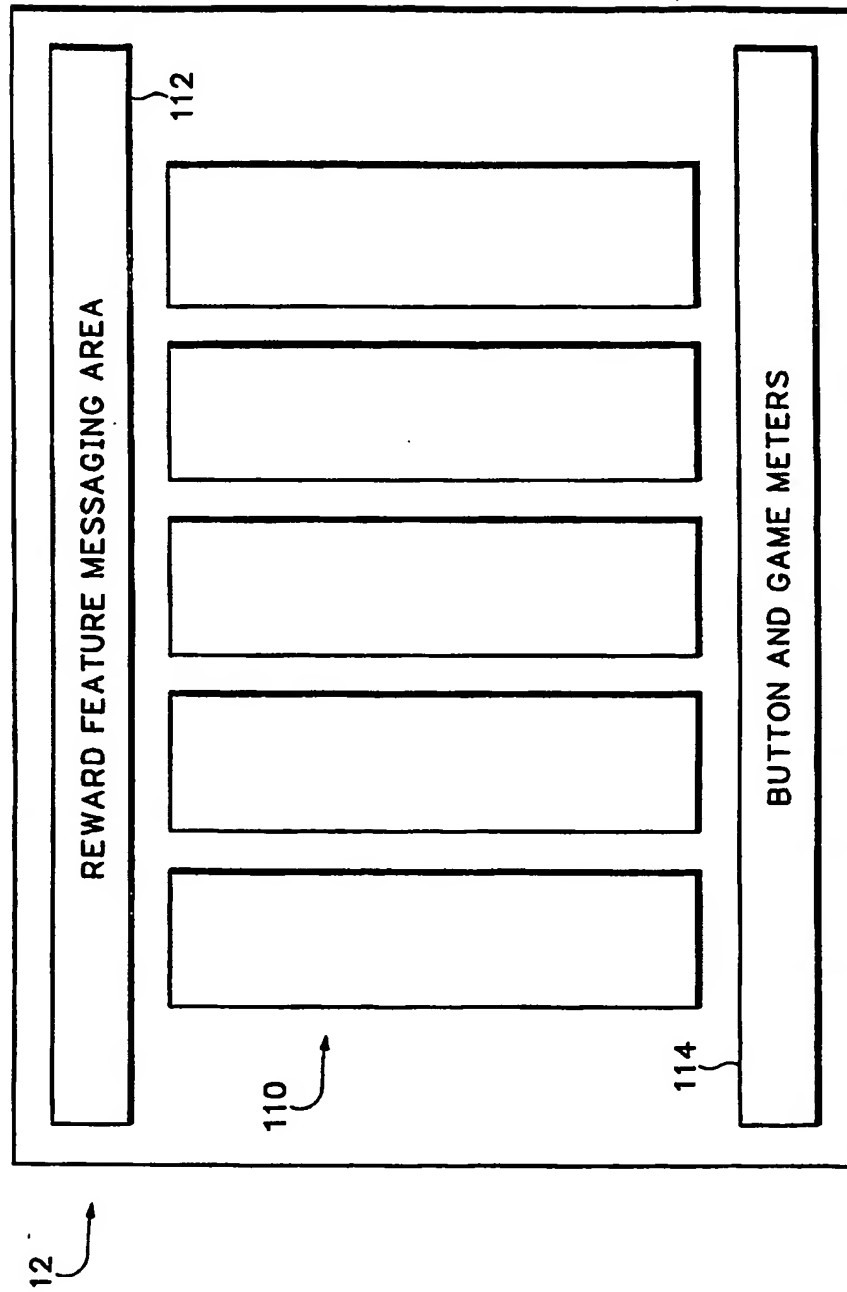


FIG.2

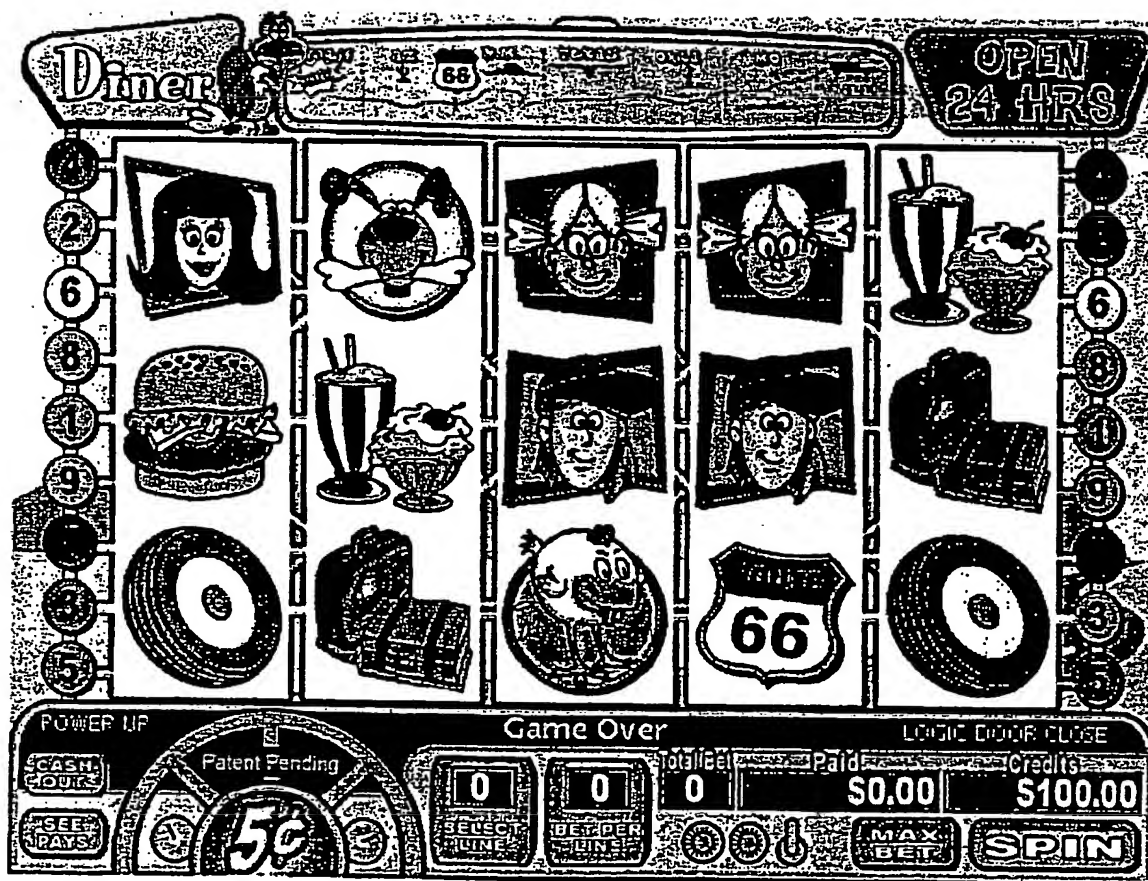


FIG. 3

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FIG. 4

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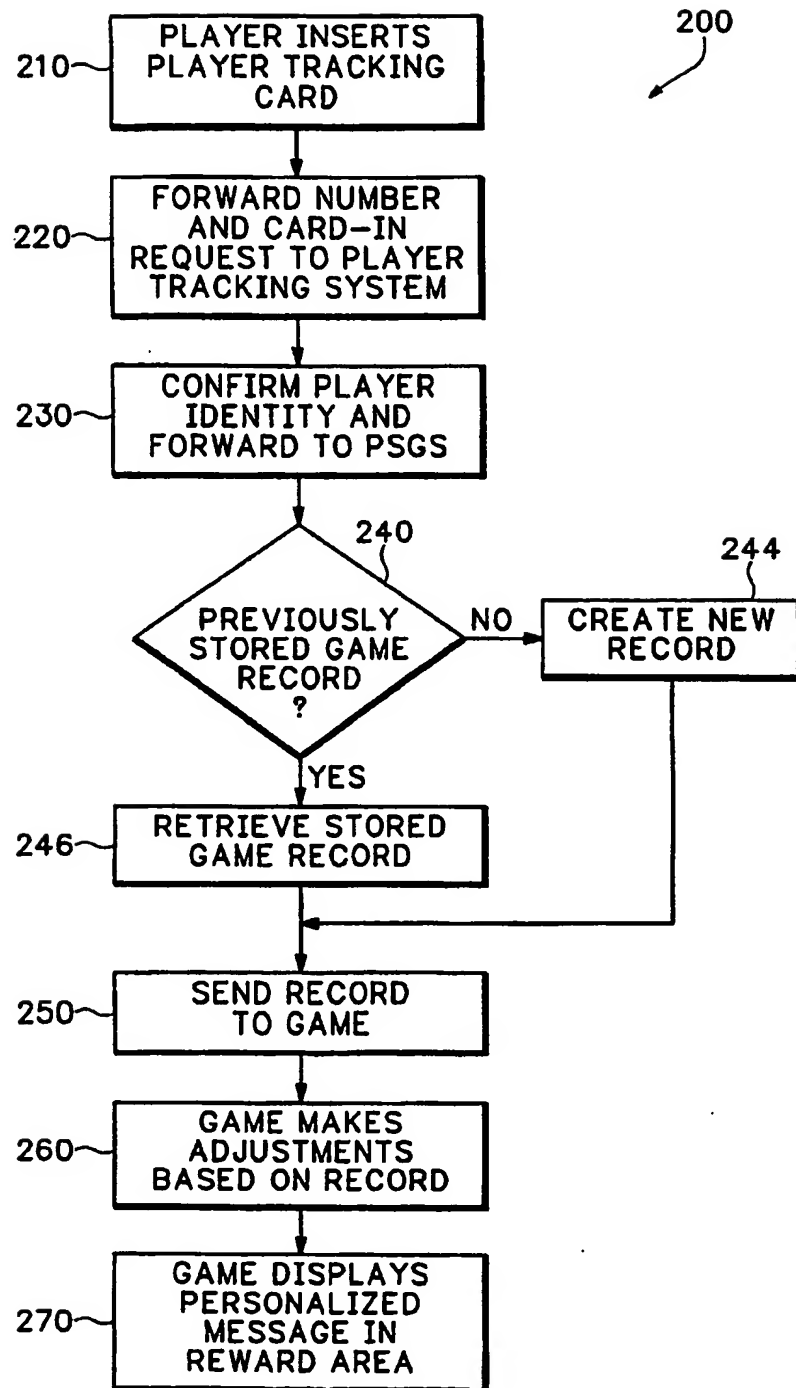


FIG.5

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